

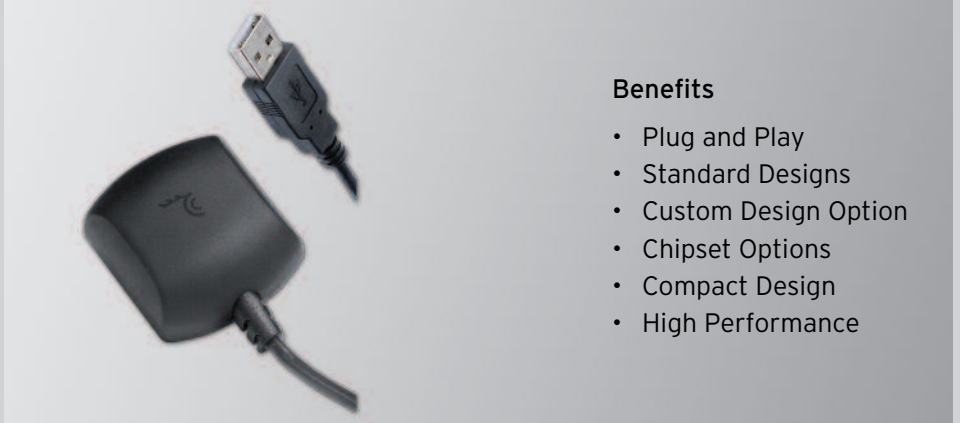
RAS 1575 - GPS Receiver Antenna

Positioning solutions from HIRSCHMANN

The Hirschmann Solutions advantage

The aim at Hirschmann Solutions was to develop a compact and robust high-performance GPS receiver antenna.

Comparable solutions already available on the market have so far often failed to impress customers. The reasons for this include poor GPS reception, the devices not being small enough, and quality defects in the housings. It was also important for customers that the finished product should be introduced quickly, without any need for them to start development work.



RAS 1575 - GPS Receiver Antenna

Benefits

- Plug and Play
- Standard Designs
- Custom Design Option
- Chipset Options
- Compact Design
- High Performance

Customized Solution

The partnership between Telit and Hirschmann Solutions has enabled these two leading manufacturers to complement each other's skills and expertise in the fields of high frequency applications and module developments.

The GPS receiver antenna RAS 1575 is based on the Telit module SE880. As a result, it delivers maximum performance in an extremely compact housing. During development, emphasis was also placed on ensuring the easiest possible integration in an existing antenna housing.

Thanks to its low current consumption, the module is ideal for mobile applications. Another advantage is its high level of resistance to interference - even without the use of additional external components.

Features (standard version)

- Complete GPS-antenna/receiver solution
- Standard product with TELIT SE 880 GPS module
- For stand-alone use or embedded in customer application
- Reduction of complexity in customers / developers unit
- Automotive production and qualification standards
- Very competitive cost even at lower volumes

System Specification

The RAS 1575 gives customers a versatile GPS receiver antenna that comes in a compact housing with simple “plug & play” magnetic installation. The antenna can be used, for example, as a retrofit solution for telematics applications in the transport and logistics sector, as well as by system integrators who use the product in larger systems (e.g. traffic control systems).

Standard Version

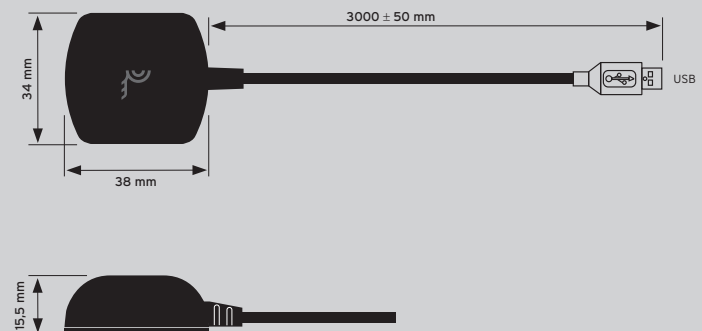
- Complete GPS antenna with embedded receiver
- Designed for magnetic mount installation
- USB 2.0, type A male
- 38 x 34 mm footprint
- Antenna on-board
- TELIT SE 880 module

GPS Receiver

Channels	48 Channels
Frequency	GPS L1, C/A Code
GPS Data Stand.	NMEA
Sensitivity	- Acquisition: -148 dBm - Navigation: -163 dBm - Tracking: -165 dBm
Position Accuracy	< 1.8 m (CEP50)
Velocity Accuracy	0.01 m/s
Heading Accuracy	0.01 degrees
Operating Limits	≤ 4 g dynamics 50,000 m altitude 500 m/s velocity
Time to 1st fix	
Hot Start	≤ 1 sec
Cold Start	≤ 35 sec
Operating Temp.	-40 °C to +75 °C
Voltage supply	5 ± 0.5 V (USB) 1,8 V (internal)
Current draw typ.	Low power mode (Tracking 1 Hz): 10mA Average full power tracking in LDO mode : 35mA average full power tracking in switcher mode: 28mA

Package

Waterproof plastic dome with die cast base plate
Dimensions: 38 (L) x 34 (W) x 15.5 (H) mm
Weight: 70 g



GPS Antenna

Operation frequency range	1575,42 ± 1,023 MHz
Polarization	RHCP
Antenna gain at Elevation	90°: + 2,0 dBic min. 20°: -5,0 dBic min.
Axial ratio at Elevation 90° (Zenith)	3,0 dB max. (mounted at metallic ground plane 60x60 mm) 5,5 dB max. (mounted at non metallic groundplane)
VSWR of the passive antenna element (ceramic patch) at frequency range 1575,42 ±1 MHz	< 1,5

Contact us to discuss your application: